

Allelopathic Plants. XVII. *Cistus ladanifer* L.

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ABSTRACT

Cistus ladanifer is a Mediterranean aromatic shrub with wide array of anatomical, phenological and physiological characteristics that explains its success as a pioneer species in arid environments. Also, it is very well fitted to cyclic and strong disturbances as those resulting from frequent fires. Therefore, in addition to a general characterization of the species, we address the fire ecology of *C. ladanifer* and the role that allelopathy might play in it. Ladane is singled out, considering not only its production and protective role but also presenting a comprehensive review of its chemical composition. Finally, allelopathic research involving microbes, crops and search for natural herbicides, and natural ecosystems is presented, reanalyzed and discussed emphasizing interactions of effects and their significance on the ecological role of secondary products of *C. ladanifer*.

Keywords: Allelopathy, antagonism, *Cistus ladanifer*, fire ecology, flavonoids, germination, interaction of effects, ladane, natural herbicides, phenolic acids, seeds, steroids, synergy, terpenoids, trichomes, UV protection.

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